

SEQUENCE LISTING

<110> INCYTE PHARMACEUTICALS, INC.

BANDMAN, Olga
 HILLMAN, Jennifer L.
 TANG, Y. Tom
 LAL, Preeti
 CORLEY, Neil C.
 GUEGLER, Karl J.
 GORGONE, Gina A.
 BAUGHN, Mariah R.

<120> HUMAN OXIDOREDUCTASE PROTEINS

<130> PF-0544 PCT

<140> To Be Assigned

<141> Herewith

<150> 60/091,177

<151> 1998-06-30

<160> 14

<170> PERL Program

<210> 1

<211> 310

<212> PRT

<213> Homo sapiens

<220>

<221> misc_feature

<223> Incyte Clone No: 321510

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Met	Pro	Leu	Leu	Val	Glu	Gly	Arg	Arg	Val	Arg	Leu	Pro	Gln	Ser
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Ala	Gly	Asp	Leu	Val	Arg	Ala	His	Pro	Pro	Leu	Glu	Glu	Arg	Ala
				20					25					30
Arg	Leu	Leu	Arg	Gly	Gln	Ser	Val	Gln	Gln	Val	Gly	Pro	Gln	Gly
				35					40					45
Leu	Leu	Tyr	Val	Gln	Gln	Arg	Glu	Leu	Ala	Val	Thr	Ser	Pro	Lys
				50					55					60
Asp	Gly	Ser	Ile	Ser	Ile	Leu	Gly	Ser	Asp	Asp	Ala	Thr	Thr	Cys
				65					70					75
His	Ile	Val	Val	Leu	Arg	His	Thr	Gly	Asn	Gly	Ala	Thr	Cys	Leu
				80					85					90
Thr	His	Cys	Asp	Gly	Thr	Asp	Thr	Lys	Ala	Glu	Val	Pro	Leu	Ile
				95					100					105
Met	Asn	Ser	Ile	Lys	Ser	Phe	Ser	Asp	His	Ala	Gln	Cys	Gly	Arg
				110					115					120
Leu	Glu	Val	His	Leu	Val	Gly	Gly	Phe	Ser	Asp	Asp	Arg	Gln	Leu
				125					130					135
Ser	Gln	Lys	Leu	Thr	His	Gln	Leu	Leu	Ser	Glu	Phe	Asp	Arg	Gln
				140					145					150
Glu	Asp	Asp	Ile	His	Leu	Val	Thr	Leu	Cys	Val	Thr	Glu	Leu	Asn

155	160	165
Asp Arg Glu Glu Asn Glu Asn His Phe	Pro Val Ile Tyr Gly Ile	
170	175	180
Ala Val Asn Ile Lys Thr Ala Glu Ile	Tyr Arg Ala Ser Phe Gln	
185	190	195
Asp Arg Gly Pro Glu Glu Gln Leu Arg	Ala Ala Arg Thr Leu Ala	
200	205	210
Gly Gly Pro Met Ile Ser Ile Tyr Asp	Ala Glu Thr Glu Gln Leu	
215	220	225
Arg Ile Gly Pro Tyr Ser Trp Thr Pro	Phe Pro His Val Asp Phe	
230	235	240
Trp Leu His Gln Asp Asp Lys Gln Ile	Leu Glu Asn Leu Ser Thr	
245	250	255
Ser Pro Leu Ala Glu Pro Pro His Phe	Val Glu His Ile Arg Ser	
260	265	270
Thr Leu Met Phe Leu Lys Lys His Pro	Ser Pro Ala His Thr Leu	
275	280	285
Phe Ser Gly Asn Lys Ala Leu Leu Tyr	Lys Lys Asn Glu Asp Gly	
290	295	300
Leu Trp Glu Lys Ile Ser Ser Pro Gly	Ser	
305	310	

<210> 2

<211> 520

<212> PRT

<213> Homo sapiens

<220>

<221> misc_feature

<223> Incyte Clone No: 634343

<400> 2

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Ile Thr Leu Gln Val Gly Thr Gln Asp Ser Phe Ile Ala Ala Val	
20 25 30	
Tyr Glu His Ala Val Ile Leu Pro Asn Lys Thr Glu Thr Pro Val	
35 40 45	
Ser Gln Glu Asp Ala Leu Asn Leu Met Asn Glu Asn Ile Asp Ile	
50 55 60	
Leu Glu Thr Ala Ile Lys Gln Ala Ala Glu Gln Gly Ala Arg Ile	
65 70 75	
Ile Val Thr Pro Glu Asp Ala Leu Tyr Gly Trp Lys Phe Thr Arg	
80 85 90	
Glu Thr Val Phe Pro Tyr Leu Glu Asp Ile Pro Asp Pro Gln Val	
95 100 105	
Asn Trp Ile Pro Cys Gln Asp Pro His Arg Phe Gly His Thr Pro	
110 115 120	
Val Gln Ala Arg Leu Ser Cys Leu Ala Lys Asp Asn Ser Ile Tyr	
125 130 135	
Val Leu Ala Asn Leu Gly Asp Lys Lys Pro Cys Asn Ser Arg Asp	
140 145 150	
Ser Thr Cys Pro Pro Asn Gly Tyr Phe Gln Tyr Asn Thr Asn Val	
155 160 165	

Val Tyr Asn Thr	Glu Gly Lys Leu Val	Ala Arg Tyr His Lys Tyr	
	170	175	180
His Leu Tyr Ser	Glu Pro Gln Phe Asn Val	Pro Glu Lys Pro Glu	
	185	190	195
Leu Val Thr Phe	Asn Thr Ala Phe Gly Arg	Phe Gly Ile Phe Thr	
	200	205	210
Cys Phe Asp Ile	Phe Phe Tyr Asp Pro Gly	Val Thr Leu Val Lys	
	215	220	225
Asp Phe His Val	Asp Thr Ile Leu Phe Pro	Thr Ala Trp Met Asn	
	230	235	240
Val Leu Pro Leu	Leu Thr Ala Ile Glu Phe	His Ser Ala Trp Ala	
	245	250	255
Met Gly Met Gly	Val Asn Leu Leu Val Ala	Asn Thr His His Val	
	260	265	270
Ser Leu Asn Met	Thr Gly Ser Gly Ile Tyr	Ala Pro Asn Gly Pro	
	275	280	285
Lys Val Tyr His	Tyr Asp Met Lys Thr Glu	Leu Gly Lys Leu Leu	
	290	295	300
Leu Ser Glu Val	Asp Ser His Pro Leu Ser	Ser Ser Leu Ala Tyr Pro	
	305	310	315
Thr Ala Val Asn	Trp Asn Ala Tyr Ala Thr	Thr Thr Ile Lys Pro Phe	
	320	325	330
Pro Val Gln Lys	Asn Thr Phe Arg Gly Phe	Ile Ser Arg Asp Gly	
	335	340	345
Phe Asn Phe Thr	Glu Leu Phe Glu Asn Ala	Gly Asn Leu Thr Val	
	350	355	360
Cys Gln Lys Glu	Leu Cys Cys His Leu Ser	Tyr Arg Met Leu Gln	
	365	370	375
Lys Glu Glu Asn	Glu Val Tyr Val Leu Gly	Ala Phe Thr Gly Leu	
	380	385	390
His Gly Arg Arg	Arg Arg Glu Tyr Trp Gln	Val Cys Thr Met Leu	
	395	400	405
Lys Cys Lys Thr	Thr Asn Leu Thr Thr Cys	Gly Arg Pro Val Glu	
	410	415	420
Thr Ala Ser Thr	Arg Phe Glu Met Phe Ser	Leu Ser Gly Thr Phe	
	425	430	435
Gly Thr Glu Tyr	Val Phe Pro Glu Val Leu	Leu Thr Glu Ile His	
	440	445	450
Leu Ser Pro Gly	Lys Phe Glu Val Leu Lys	Asp Gly Arg Leu Val	
	455	460	465
Asn Lys Asn Gly	Ser Ser Gly Pro Ile Leu	Thr Val Ser Leu Phe	
	470	475	480
Gly Arg Trp Tyr	Thr Lys Asp Ser Leu Tyr	Ser Ser Cys Gly Thr	
	485	490	495
Ser Asn Ser Ala	Ile Thr Tyr Leu Leu Ile	Phe Ile Leu Leu Met	
	500	505	510
Ile Ile Ala Leu	Gln Asn Ile Val Met Leu		
	515	520	

<210> 3

<211> 349

<212> PRT

<213> Homo sapiens

<220>

<221> misc_feature

<223> Incyte Clone No: 1942326

<400> 3

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Met Lys Gly Leu Tyr Phe Gln Gln Ser Ser Thr Asp Glu Glu Ile
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Thr Phe Val Phe Gln Glu Lys Glu Asp Leu Pro Val Thr Glu Asp
 20           25           30
Asn Phe Val Lys Leu Gln Val Lys Ala Cys Ala Leu Ser Gln Ile
 35           40           45
Asn Thr Lys Leu Leu Ala Glu Met Lys Met Lys Lys Asp Leu Phe
 50           55           60
Pro Val Gly Arg Glu Ile Ala Gly Ile Val Leu Asp Val Gly Ser
 65           70           75
Lys Val Ser Phe Phe Gln Pro Asp Asp Glu Val Val Gly Ile Leu
 80           85           90
Pro Leu Asp Ser Glu Asp Pro Gly Leu Cys Glu Val Val Arg Val
 95           100          105
His Glu His Tyr Leu Val His Lys Pro Glu Lys Val Thr Trp Thr
 110          115          120
Glu Ala Ala Gly Ser Ile Arg Asp Gly Val Arg Ala Tyr Thr Ala
 125          130          135
Leu His Tyr Leu Ser His Leu Ser Pro Gly Lys Ser Val Leu Ile
 140          145          150
Met Asp Gly Ala Ser Ala Phe Gly Thr Ile Ala Ile Gln Leu Ala
 155          160          165
His His Arg Gly Ala Lys Val Ile Ser Thr Ala Cys Ser Leu Glu
 170          175          180
Asp Lys Gln Cys Leu Glu Arg Phe Arg Pro Pro Ile Ala Arg Val
 185          190          195
Ile Asp Val Ser Asn Gly Lys Val His Val Ala Glu Ser Cys Leu
 200          205          210
Glu Glu Thr Gly Gly Leu Gly Val Asp Ile Val Leu Asp Ala Gly
 215          220          225
Val Arg Leu Tyr Ser Lys Asp Asp Glu Pro Ala Val Lys Leu Gln
 230          235          240
Leu Leu Pro His Lys His Asp Ile Ile Thr Leu Leu Gly Val Gly
 245          250          255
Gly His Trp Val Thr Thr Glu Glu Asn Leu Gln Leu Asp Pro Pro
 260          265          270
Asp Ser His Cys Leu Phe Leu Lys Gly Ala Thr Leu Ala Phe Leu
 275          280          285
Asn Asp Glu Val Trp Asn Leu Ser Asn Val Gln Gln Gly Lys Tyr
 290          295          300
Leu Cys Ile Leu Lys Asp Val Met Glu Lys Leu Ser Thr Gly Val
 305          310          315
Phe Arg Pro Gln Leu Asp Glu Pro Ile Pro Leu Tyr Glu Ala Lys
 320          325          330
Val Ser Met Glu Ala Val Gln Lys Asn Gln Gly Arg Lys Lys Gln
 335          340          345
Val Val Gln Phe

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<210> 4

<211> 332

<212> PRT

<213> Homo sapiens

<220>

<221> misc_feature

<223> Incyte Clone No: 2395269

<400> 4

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Met Leu Ala Val His Phe Asp Lys Pro Gly Gly Pro Glu Asn Leu
 1          5          10          15
Tyr Val Lys Glu Val Ala Lys Pro Ser Pro Gly Glu Gly Glu Val
          20          25          30
Leu Leu Lys Val Ala Ala Ser Ala Leu Asn Arg Ala Asp Leu Met
          35          40          45
Gln Arg Gln Gly Gln Tyr Asp Pro Pro Pro Gly Ala Ser Asn Ile
          50          55          60
Leu Gly Leu Glu Ala Ser Gly His Val Ala Glu Leu Gly Pro Gly
          65          70          75
Cys Gln Gly His Trp Lys Ile Gly Asp Thr Ala Met Ala Leu Leu
          80          85          90
Pro Gly Gly Gly Gln Ala Gln Tyr Val Thr Val Pro Glu Gly Leu
          95          100          105
Leu Met Pro Ile Pro Glu Gly Leu Thr Leu Thr Gln Ala Ala Ala
          110          115          120
Ile Pro Glu Ala Trp Leu Thr Ala Phe Gln Leu Leu His Leu Val
          125          130          135
Gly Asn Val Gln Ala Gly Asp Tyr Val Leu Ile His Ala Gly Leu
          140          145          150
Ser Gly Val Gly Thr Ala Ala Ile Gln Leu Thr Arg Met Ala Gly
          155          160          165
Ala Ile Pro Leu Val Thr Ala Gly Ser Gln Lys Lys Leu Gln Met
          170          175          180
Ala Glu Lys Leu Gly Ala Ala Ala Gly Phe Asn Tyr Lys Lys Glu
          185          190          195
Asp Phe Ser Glu Ala Thr Leu Lys Phe Thr Lys Gly Ala Gly Val
          200          205          210
Asn Leu Ile Leu Asp Cys Ile Gly Gly Ser Tyr Trp Glu Lys Asn
          215          220          225
Val Asn Cys Leu Ala Leu Asp Gly Arg Trp Val Leu Tyr Gly Leu
          230          235          240
Met Gly Gly Gly Asp Ile Asn Gly Pro Leu Phe Ser Lys Leu Leu
          245          250          255
Phe Lys Arg Gly Ser Leu Ile Thr Ser Leu Leu Arg Ser Arg Asp
          260          265          270
Asn Lys Tyr Lys Gln Met Leu Val Asn Ala Phe Thr Glu Gln Ile
          275          280          285
Leu Pro His Phe Ser Thr Glu Gly Pro Gln Arg Leu Leu Pro Val
          290          295          300
Leu Asp Arg Ile Tyr Pro Val Thr Glu Ile Gln Glu Ala His Lys
          305          310          315
Tyr Met Glu Ala Asn Lys Asn Ile Gly Lys Ile Val Leu Glu Leu
          320          325          330
Pro Gln

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<210> 5
 <211> 444
 <212> PRT
 <213> Homo sapiens

<220>
 <221> misc_feature
 <223> Incyte Clone No: 008879

<400> 5

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Leu	Arg	Thr	Asp	Ser	Gly	Leu	Val	Ile	Asp	Arg	Lys	Val	Tyr	Asn	35	40	45	
Ile	Thr	Lys	Trp	Ser	Ile	Gln	His	Pro	Gly	Gly	Gln	Arg	Val	Ile	50	55	60	
Gly	His	Tyr	Ala	Gly	Glu	Asp	Ala	Thr	Asp	Ala	Phe	Arg	Ala	Phe	65	70	75	
His	Pro	Asp	Leu	Glu	Phe	Val	Gly	Lys	Phe	Leu	Lys	Pro	Leu	Leu	80	85	90	
Ile	Gly	Glu	Leu	Ala	Pro	Glu	Glu	Pro	Ser	Gln	Asp	His	Gly	Lys	95	100	105	
Asn	Ser	Lys	Ile	Thr	Glu	Asp	Phe	Arg	Ala	Leu	Arg	Lys	Thr	Ala	110	115	120	
Glu	Asp	Met	Asn	Leu	Phe	Lys	Thr	Asn	His	Val	Phe	Phe	Leu	Leu	125	130	135	
Leu	Leu	Ala	His	Ile	Ile	Ala	Leu	Glu	Ser	Ile	Ala	Trp	Phe	Thr	140	145	150	
Val	Phe	Tyr	Phe	Gly	Asn	Gly	Trp	Ile	Pro	Thr	Leu	Ile	Thr	Ala	155	160	165	
Phe	Val	Leu	Ala	Thr	Ser	Gln	Ala	Gln	Ala	Gly	Trp	Leu	Gln	His	170	175	180	
Asp	Tyr	Gly	His	Leu	Ser	Val	Tyr	Arg	Lys	Pro	Lys	Trp	Asn	His	185	190	195	
Leu	Val	His	Lys	Phe	Val	Ile	Gly	His	Leu	Lys	Gly	Ala	Ser	Ala	200	205	210	
Asn	Trp	Trp	Asn	His	Arg	His	Phe	Gln	His	His	Ala	Lys	Pro	Asn	215	220	225	
Ile	Phe	His	Lys	Asp	Pro	Asp	Val	Asn	Met	Leu	His	Val	Phe	Val	230	235	240	
Leu	Gly	Glu	Trp	Gln	Pro	Ile	Glu	Tyr	Gly	Lys	Lys	Lys	Leu	Lys	245	250	255	
Tyr	Leu	Pro	Tyr	Asn	His	Gln	His	Glu	Tyr	Phe	Phe	Leu	Ile	Gly	260	265	270	
Pro	Pro	Leu	Leu	Ile	Pro	Met	Tyr	Phe	Gln	Tyr	Gln	Ile	Ile	Met	275	280	285	
Thr	Met	Ile	Val	His	Lys	Asn	Trp	Val	Asp	Leu	Ala	Trp	Ala	Val	290	295	300	
Ser	Tyr	Tyr	Ile	Arg	Phe	Phe	Ile	Thr	Tyr	Ile	Pro	Phe	Tyr	Gly	305	310	315	
Ile	Leu	Gly	Ala	Leu	Leu	Phe	Leu	Asn	Phe	Ile	Arg	Phe	Leu	Glu	320	325	330	
Ser	His	Trp	Phe	Val	Trp	Val	Thr	Gln	Met	Asn	His	Ile	Val	Met	335	340	345	

Glu Ile Asp Gln Glu Ala Tyr Arg Asp Trp Phe Ser Ser Gln Leu	
350	355 360
Thr Ala Thr Cys Asn Val Glu Gln Ser Phe Phe Asn Asp Trp Phe	
365	370 375
Ser Gly His Leu Asn Phe Gln Ile Glu His His Leu Phe Pro Thr	
380	385 390
Met Pro Arg His Asn Leu His Lys Ile Ala Pro Leu Val Lys Ser	
395	400 405
Leu Cys Ala Lys His Gly Ile Glu Tyr Gln Glu Lys Pro Leu Leu	
410	415 420
Arg Ala Leu Leu Asp Ile Ile Arg Ser Leu Lys Lys Ser Gly Lys	
425	430 435
Leu Trp Leu Asp Ala Tyr Leu His Lys	
440	

<210> 6
 <211> 286
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> misc_feature
 <223> Incyte Clone No: 2274011

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 20 25 30
 Val Leu His Tyr Arg Glu Gly Leu Gly Trp Asp Gly Ser Ala Leu
 35 40 45
 Glu Phe Asn Trp His Pro Val Leu Met Val Thr Gly Phe Val Phe
 50 55 60
 Ile Gln Gly Ile Ala Ile Ile Val Tyr Arg Leu Pro Trp Thr Trp
 65 70 75
 Lys Cys Ser Lys Leu Leu Met Lys Ser Ile His Ala Gly Leu Asn
 80 85 90
 Ala Val Ala Ala Ile Leu Ala Ile Ile Ser Val Val Ala Val Phe
 95 100 105
 Glu Asn His Asn Val Asn Asn Ile Ala Asn Met Tyr Ser Leu His
 110 115 120
 Ser Trp Val Gly Leu Ile Ala Val Ile Cys Tyr Leu Leu Gln Leu
 125 130 135
 Leu Ser Gly Phe Ser Val Phe Leu Leu Pro Trp Ala Pro Leu Ser
 140 145 150
 Leu Arg Ala Phe Leu Met Pro Ile His Val Tyr Ser Gly Ile Val
 155 160 165
 Ile Phe Gly Thr Val Ile Ala Thr Ala Leu Met Gly Leu Thr Glu
 170 175 180
 Lys Leu Ile Phe Ser Leu Arg Asp Pro Ala Tyr Ser Thr Phe Pro
 185 190 195
 Pro Glu Gly Val Phe Val Asn Thr Leu Gly Leu Leu Ile Leu Val
 200 205 210
 Phe Gly Ala Leu Ile Phe Trp Ile Val Thr Arg Pro Gln Trp Lys

	215		220		225
Arg Pro Lys Glu	Pro Asn Ser Thr Ile	Leu His Pro Asn Gly Gly			
	230		235		240
Thr Glu Gln Gly	Ala Arg Gly Ser Met	Pro Ala Tyr Ser Gly Asn			
	245		250		255
Asn Met Asp Lys	Ser Asp Ser Glu Leu	Asn Asn Glu Val Ala Ala			
	260		265		270
Arg Lys Arg Asn	Leu Ala Leu Asp Glu	Ala Gly Gln Arg Ser Thr			
	275		280		285
Met					

<210> 7
 <211> 1126
 <212> DNA
 <213> Homo sapiens

<220>
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 <223> Incyte Clone No: 321510

<400> 7

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tggtcaacaa gtgggacccc agggccttct gtatgttcag caaagagagc ttgcagtgac 180
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tgtggtcctg aggcacacag gtaatggggc cacctgcttg acacattgtg acggaaccga 300
caccaaagct gaggtccctt tgatcatgaa ctccataaaa tccttttctg accacgctca 360
atgtggaagg ctggaagtac accttgttgg aggttctagt gacgacaggc agttgtcaca 420
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tgtggatttc tgggtgcacc aagatgacaa gcaaatacta gagaatcttt ccacttcgcc 780
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tcctacatct gttgggtctt aggcctcctt ccctcctcag tgtctttcaa atgactttca 1080
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<210> 8
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 <212> DNA
 <213> Homo sapiens

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 <223> Incyte Clone No: 634343

<400> 8

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aatcactaaa ccttggccat ggtcacttcc tcttttccaa tctctgtggc agtttttggc 300
ctaataaccc tgcaggttgg tactcaggac agttttatag ctgcagtgtg tgaacatgct 360
gtcatttttg caaataaaac agaaacacca gtttctcagg aggatgcctt gaatctcatg 420
aacgagaata tagacattct ggagacagcg atcaagcagg cagctgagca ggggtgctcg 480
atcattgtga ctccagaaga tgcactttat ggatggaaat ttaccagggg aactgttttc 540
ccttatctgg aggatatccc agaccctcag gtgaactgga ttccgtgtca agacccccac 600
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caaaatattg taatgttata gggcgctctt ttatcactca gcttctgcat catatgcttg 1860
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ataatgttgt ccattttttt ggctactctg aaatgttgca gtgtggaaca atggaaagag 2040
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gactttgtgt gtatggggga cttgtatgta tgggagttag gagtttcagg gccattgcaa 2160
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tccctttgac attaaagact atttgaattc aaaaaaaaaa 2260

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<210> 9

<211> 1471

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<223> Incyte Clone No: 1942326

<400> 9

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aggaagatct tctgtttaca gaggataact ttgtgaaact tcaagttaaa gcttgtgctc 180
tgagccagat aaatacaaaag cttctggcag aaatgaagat gaaaaaggat ttatttcctg 240
ttgggagaga aattgctgga attgtattag atgttggaag caaggatatca ttctttcaac 300
cagatgatga agtagttgga attttgcccc tggactctga agaccctgga ctttgtgaag 360
ttgttagagt acatgagcat tacttggttc ataaaccaga aaaggtcaca tggacggaag 420
cagcaggaag cattcgggat ggagtgcgtg cctatacagc tctgcattat ctttctcatc 480
tctctcctgg aaaatcagtg ctgataatgg atggagcaag tgcatttggc acaatagcta 540

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3184

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<211> 458

<212> PRT

<213> Helianthus annuus

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<221> misc_feature

<223> GenBank ID No: g1040729

<400> 13

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Gly Thr Ala Trp Lys His Leu Asp Lys Leu Phe Thr Gly Tyr His
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Leu Lys Asp Tyr Gln Val Ser Asp Ile Ser Arg Asp Tyr Arg Lys
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WO 00/00622

PCT/US99/14711

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<220>

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<223> GenBank ID No: g1345640

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